



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,530	01/24/2002	Leonard L. Diaddario, JR.	PVO 2 0009	4334
7590	04/15/2004		EXAMINER	
Scott A. McCollister Fay, Sharpe, Fagan, Minnich & McKee, LLP 7th Floor 1100 Superior Avenue Cleveland, OH 44114-2518			OLTMANS, ANDREW L	
			ART UNIT	PAPER NUMBER
			1742	
DATE MAILED: 04/15/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/056,530	DIADDARIO, ET AL.
	Examiner	Art Unit
	Andrew L Oltmans	1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 December 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 16-24 is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Status of the Claims

1. Claims 1-24 remain pending in this application. In view of applicant's amendment, the rejection under 35 USC 112, second paragraph, made in the previous Office Action has been withdrawn. Likewise, in view of applicant's amendments and applicant's arguments, the rejection under 35 USC 102 and 103 in view of Crotty have been withdrawn. However, a new ground for rejection has been made under 35 USC 103 in view of Higgins and Higgins in view of Crotty. Because the grounds for rejection are new, this Office Action is NON-FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Higgins 4,801,337

3. Claims 1-2, 7 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins 4,801,337 (Higgins).

Higgins teaches a coating composition for coating zinc coated articles (col 1, line 8) and the method of using the composition, wherein the composition contains Cr(III) ions, Co(II) ions, nitrate ions and water, wherein the molar ratio of nitrate to Cr+Co that overlaps the claimed

Art Unit: 1742

amount, wherein the composition is substantially free of Cr(VI) and wherein the composition is substantially free of an oxidizing agent, as instantly claimed in claims 1-2 and 11-12 (col 3):

A treatment solution suitable for spray application at 45° C. for 2 to 15 seconds is made by dissolving in water the following components.

30

Co ²⁺ :	0.2 gl ⁻¹ - added as nitrate
Cr ³⁺ :	0.2 gl ⁻¹ - added as acetate
Fe ³⁺ :	0.15 gl ⁻¹ - added as nitrate
Sodium Heptonate:	2.2 gl ⁻¹
NaOH:	19.0 gl ⁻¹

35

Higgins teaches that the anion for the chromium and cobalt may be nitrate, or other suitable inorganic acid salt (col 2, lines 5-13 and 16-20). Higgins further teaches the Cr(III) content as being 0.04 to 0.4 g/L (col 2, lines 43-44), the Co(II) content (i.e. the polyvalent metal ion) is 0.3 to 3 g/L, wherein nitrate ion is in an amount corresponding the to the metal ion source (col 2, lines 5-8 and 43, Example 1), wherein the concentrations of the Cr(III), Co (II) and nitrate appear to overlap the concentrations instantly claimed in claims 7 and 15. Higgins teaches a temperature range for treatment and time of contact that overlaps the temperature and time instantly claimed, as recited in claims 13 and 14 (col 2):

such as dip or, preferably, spray. Although the treatment temperature can be up to, for instance, 90° C. it is 65 preferably below 60° C. and most preferably below 50° C. Generally it is above 20° C. Although in many processes treatment temperatures of 35° to 50° C., typically

(col 3):

The duration of the treatment is generally from 2 to 60 seconds, preferably 5 to 30 seconds. In general the 5

Art Unit: 1742

Higgins fails to meet all the limitations of the instant claims in that Higgins does not explicitly teach the exact range of composition or process conditions.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the concentration of the components taught in the coating composition and the conditions (i.e. temperature and time) of the treatment taught by the reference overlaps that of the instant claims, In re Peterson, 65 USPQ2d 1379, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

Higgins 4,801,337 in view of Crotty 4,578,122

4. Claims 3-6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higgins 4,801,337 (Higgins) in view of Crotty 4,578,122 (Crotty).

Higgins teaches and is applied as above in paragraph 3.

Higgins fails to meet all the limitations of the instant claims in that Higgins does not explicitly teach the addition of sulfate or the claimed film polisher nor the pH of the claimed solution.

Crotty teaches a coating composition for coating zinc coated articles (col 3, lines 28-34) and the method of using the composition, wherein the composition contains Cr(III) ions (col 3, lines 51-53; col 4, lines 17-22), Co(II) ions (col 3, line 62), nitrate ions (col 4, lines 42-56), water (col 3, line 47), film polishers, including fluoride salts (col 5, line 53), sulfate (col 4, lines 39-41) and wherein the pH is the 1.2 to 2.5 (col 3, lines 54). Crotty teaches that the pH is desirable because the bath results in a desirable clear to light-blue passivate film (col 4, lines 23-26).

One of ordinary skill in the art would have found the addition of the sulfate or film polisher obvious to one of ordinary skill in the art at the time that the invention was made

Art Unit: 1742

because the film polisher and sulfate are merely coating additives known in the art (as taught in Crotty) and one of ordinary skill in the art would have been motivated to add additives known in the art in order to achieve desirable coating properties.

With respect to the pH one of ordinary skill in the art at the time that the invention was made would have found it obvious to adjust the pH of Higgins to a pH taught in Crotty in order to provide a coating that desirably clear or light blue, as taught in Crotty.

Allowable Subject Matter

5. Claims 16-24 are allowed.

A primary reason for the allowance of claims 16-24 is that the prior art fails to teach or suggest, either alone or in combination, the instantly claimed method, wherein the method includes all of the claimed steps, including the conversion coating with the particular composition claimed, wherein the substrate is subsequently rinsed and exposed to a dye solution, as instantly claimed.

Response to Arguments

6. Applicant's arguments filed December 12, 2003 have been fully considered but they are not fully persuasive.

7. Claims 1-24 remain pending in this application. In view of applicant's amendment, the rejection under 35 USC 112, second paragraph, made in the previous Office Action has been withdrawn. Likewise, in view of applicant's amendments and applicant's arguments, the rejection under 35 USC 102 and 103 in view of Crotty have been withdrawn. However, a new

ground for rejection has been made under 35 USC 103 in view of Higgins and Higgins in view of Crotty. The reasons for rejection are set forth in the rejection above. However, the arguments that pertain to the Higgins reference will be addressed below.

8. It is noted that applicant's calculations and arguments with respect to the "ratio" clearly set forth that the ratio means molar ratio.

9. With respect to applicant's argument that the Higgins reference fails to teach the ratio, the examiner has withdrawn the anticipation rejection and relied on the more broad disclosure of polyvalent ion (e.g. cobalt) including 0.3 to 3 g/L (col 2, line 43). Further the examiner relies on the teaching in col 2, lines 5-13 and 16-20 explaining that the preferred anions are not limited to nitrate and may include other suitable anions. The examiner maintains that the molar ratio of the cobalt and nitrate taught in Higgins overlaps the ratio of nitrate to cobalt/chromium instantly claimed.

10. With respect to applicant's argument that the Higgins reference is not relevant prior art, the argument is not persuasive because the pH is not claimed in the independent claim and the technology of coating metallic substrates with heavy ions, including cobalt and chromium is common between the reference and the claimed invention.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Oltmans whose telephone number is 571-272-1248. The examiner can normally be reached from 7:00 to 3:30, Monday to Friday.

Art Unit: 1742

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew L. Oltmans
Patent Examiner
Art Unit 1742

/alo